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SQM Comparison Matrix – LCUG – FCC – DOJ - Company

The matrix is divided into 8 sections, which map to the layout of the LCUG Version 7.0 document:

- 1) Ordering & Provisioning
- 2) Maintenance & Repair
- 3) General
- 4) Billing
- 5) OS/DA/DL
- 6) Network Performance
- 7) Collocation Provisioning
- 8) Interconnection/Unbundled Elements and Combos (IUE)

In addition, the following three supplemental sections have been added:

- 1) Poles, Conduits & Rights of Way
- 2) NXX
- 3) Bona Fide Requests (BFRs)

An entry of "I" for ILEC and "C" for CLEC appears in the Penalty column and denotes whether the "I" or "C" is assessed the penalty. An entry of "A" denotes that penalties can result from terms related to interconnection agreements.

Note:

In some instances the individual company matrices returned to Bellcore for compilation were populated with measurement formulas. The attached summary matrix includes a check mark next to the measurement in which the formula was entered as opposed to a Bellcore interpretation of the measurement formulas supplied.

Ordering & Provisioning

Mossurement	LCUG	FÇC	bon,	AM	BA 2	88	CBT	GTE	SBC	SNET	USW	Penalty
Average completion interval	1	1				1			1	1		
Average Offered interval	1				1/3					1		
Average/mean Installation Interval		1	1	1					1		1	
Standard deviation of interconnection trunk installation interval									1			
% orders completed on time	1	1				1	1					
% installations completed within "X" business days			1	<u> </u>					1			
% installation appointments/ commitments met										1	1	I
% Confirmed due dates not met				4								I,A
% missed due dates		1	1				1		1			
% missed due dates interconnection trunks									1			
% ILEC caused missed due dates			1						1			
% ILEC caused missed due dates > 30 days									1			
# orders cancelled after due date caused by ILEC									1			

¹ For the most part, all items in this column include Resale POTS & Specials, UNEs, Interconnection trunks and INP in all sections of the matrix.

dispatched and non-dispatched. POTS dispatched orders are also separated by 1-5 lines, 6-9 lines and > 10 lines.

² O&P information is reported separately for POTS (Res. & Bus. separately), SPECIALS and trunks. It is totaled for all orders, separated by type of service and mechanized and non-mechanized orders. In addition, orders involving dispatch are reported separately from non-dispatched orders.

3 Reported in total and separated for POTS, SPECIALS, trunks, DSO, DS1, and DS3 based on NY carrier/carrier agreements. POTS & SPECIALS are further separated by

Messurement	LCUG	FCC	DOJ	AM	BA	86	CBT	GTE	SBC	SNET	USW	Penalty
% company missed due dates due to lack of facilities			1			'1			1			;
Delay days for missed due dates due to lack of facilities			1						1			
Delay days for missed due dates									1			
% CLEC caused due date misses											1	
% order accuracy	1											
Mechanized provisioning accuracy			1						1			
% mechanized order flow through	1	1			1	1						
Order process % flow thru			1						1		1	
% Electronic processing				1								
% order rejections	1		1	1	1	1			1			
Average submissions per order	1	1										
Average reject notice interval	1	1		1		1					1	1
Average reject response time					1							1
Mean time to return mechanized rejects			1						1		1	

Messurement	LCUG	FÇC	DÓ	AM	BA	88	CBT	GTE	SEC	SNET	USW	Penalty
% reject within X hours	†				11.		.†	 	+	+		
Percent mechanized rejects returned within 1 hour of the start of the EDI/LASR batch process			٧			•			1			
FOC interval	1					1					1	
Average order confirmation response time					1							
% order confirmation					1.							
% FOCs in "X" hrs			1		<u> </u>				1			
% FOC ≤or within 24 hours					1			1		1	 	1
855 FOC response time %<24. <48, <96, >96 hrs				1								
% FOC by 5PM next business day							1					
Average time to return FOC/855 FOC		1	1	1					1			
Jeopardy interval	1	1				1						
Average completion notice interval	1	1		1		1	1			1	1	ı
Average interval completed					1/8.	1					1	1

 ⁴² hrs. mechanized POTS., SPECIALS (NY & MA)

 ²⁴ hrs. non mechanized POTS (NY & MA)

 ²⁴ hrs non mechanized < 10 lines POTS (NY & MA)

 ⁷² hrs. non mechanized ≥ 10 lines POTS, SPECIALS (NY & MA)

 ⁴⁸ hrs. non mechanized SPECIALS < 10 lines (NY & MA)

 ¹⁰ BUSINESS days trunks

Average interval completed is broken down into within 1 day, 2 days, 3 days, 4 days, and 5 days depending upon the type of service (POTS, SPECIALS, trunks, DSO, DS1, and DS3) and in some cases, the number of lines based on NY carrier/carrier agreements. POTS & SPECIALS are further separated by dispatched and non dispatched

Measurement	LCUG	FÇC	DO1	AM	BA	88	CST	GTE	SBC	SNET	USW	Penalty
Completion notification – average response time % on time					1	1						
% mechanized completions returned within 1 hr of batch completion notice			٧						١			
Average time to return mechanized completions			٦						1			
% completion/attempts w/o notice or with < 24 hrs notice	7						}					
% notification of completed dispatched orders < 2 hours						:				1		
% jeopardies	7	1				1						
% missed appmts					16							
% missed appmts customer					NY,MA						:	
Average delay days					1							
Average delay days facilities					1							
Average coordinated conversion interval	1	٧				1						
% missed mechanized INP/PNP conversions									1			
% on time LNP (POTS)					1							
% on time UNE hot cut (POTS)					1							
% service loss from early cuts	1											
% premature disconnect (coordinated cut-overs)						:			1			

⁶ Totaled for company and separately for complex orders, dispatched orders, non dispatched ⁷ Under development.

Ordering & Provisioning				4.00		1		1	T==	T	T	T =
Manurement	rcne	PCC	DO	AM	BA	85	CST	OTE .	SBG	SNET	USW	Penalty
% service loss from late cuts	1								1			
% ILEC caused delays]					1			1			
(coordinated cut-overs)					<u> </u>				1	1	1	
Held order interval	1	1			1	1						
% missed appmts facilities					1							
# of facilities misses delayed > 30 days					1							
Average Interval for past due orders				1								
% late orders completed > 15 days past due date											1	
% orders held 6-30 days				7				1			1	1
% orders held >30 days				7								1
% orders held ≥ 90 days	1					1						1
% orders held > 15 days	1					11						1
% Local Number Portability (INP) within commitment window										1		

Maintenance & Repair

Maintenance & Repair												
Measurement	fene	FCC	DON	AM	BA *	88	COT	GTE	SEC	SNET	USW	Penalty
Mean time/time to restore/repair	1	1	1		1	1:1	1		1		1	1
Mean time to repair NXXs									1			
% troubles resolved within estimate		1				-				}	1	
Mean time to repair/restore network troubles				1						1		ı
Average jeopardy notice interval for maintenance/ trouble handling	7											
Repeat trouble rate	1		1				1		1			1
% Repeat maintenance/ subsequent reports				1	1	7			1		1	1
Repeat trouble rate within 30 days		1			1	1				1		
30 day trouble frequency		1										
% troubles within 7 days of an installation					1							
% troubles within 30 days of an installation					1							
Trouble report rate	1			1	1	1			1		1 1	l
% CPE Reports					1							
% no trouble found/test OK					1							
% no access					1			I				
% troubles in 30 days of new installations & other order activity	1					1	1		1		1	

⁸ Reported separately by type of service network, troubles, CO, troubles, loop troubles for dispatched and non dispatched trouble reports

Maintenance & Repair					- · - · · · · ·	•		•				
Moseurement	LCUG	FCC	DOJ	AN	BA	88	CST	GTE	SOC	SNET	USW	Penalty
%Installation Trouble Reports (7 days ⁸) (10 days ¹⁰)				1					4			ı
% customer troubles resolved within estimate	1	1				1						,
% Repair commitments not met (missed)			1	1	1				1			ı
% maintenance appmts/ commitments met; POTS, Digital Specials, Analog Special										1	1	ı
Network reports per 100 lines							1			1		1
% trouble reports notification of completion within 24 hrs										1		
Receipt to clear duration			1				1		1			
% out of service < 24 hrs			1		T				1		1	
% Out of service >24 hrs				1	1						1	A
% Out of service X 11 hours					11				 			
Failure frequency			1			1	1	1	1	1	1	
Average trunk restoration interval		4	1						1			

Applies to Ameritech
 Applies to SBC
 X is a variable and changes depending upon type of service, dispatched troubles, non dispatched

General							T	T	T	· · · · · · · · · · · · · · · · · · ·	T	
Measurement	reng	PGC	נסמ	AM	BA	185	CINT	GTE	SEC	SNET	USW	Penalty
% system/gateway availability	1	1			√ NY ¹²	11				J 13	1	
Pre-ordering interface - % time unavailable				1								I
Ordering ASR - % Time Unavailable				1								ı
EBTA - % Time Unavailable				1								ı
Averaged response time for OSS interfaces			1		1				1	J 14		
Averaged OSS response/cycle time address verification	1	1	1	1	NY	1			1		1	ı
Averaged OSS response/ cycle time request for TN	1	1	1	1	NY	1			1		1	1
Averaged OSS response/ cycle time request for CSR	1		1	1	1	1	·		1		1	1
Averaged OSS response/ cycle time product/ service/ facility/function availability	1	1	1	1	NY	1			1		1	
Averaged OSS response/ cycle time service appmt/due date scheduling/ availability	1	1	1		NY	1			1		1	
Averaged OSS response /cycle time dispatched	1		1			1			1			
Average response time other pre ordering					MA							
Average OSS response time trouble reporting					NY							

Data is segregated by total, prime and non-prime
 % availability of MSAP (Mechanized Services Access Platform)
 % service requests acknowledged ≤ 5 seconds MSAP

General

Messyrement	LCUG	FCC	bon	AM	BA	88	CBT	GTE	SBC	SHET	USW	Penalty
EASE average response time			1		 	 	<u> </u>	 	1	 	 -	
Mean time to answer	1					1,1						
LOC average speed of answer			1						1			
% busy LOC			1		T		·		1			
% calls answered ≤ 20 seconds –maintenance center										1		
Average speed of answer – repair				1	1						1	
Speed of answer – repair %> 20 sec				1								
LSC average speed of answer			1						1			
% busy LSC			1						1		1	
% calls answered within or ≤ 20 seconds –provisioning center										1	1	
Average speed of answer – ordering				1	NY							
Speed of answer – ordering % >10 sec				1								
Call abandonment rate	1				†	1	†	1		1	1	1

Billing

Massurement	rone	NAC.	DOJ	AM	BA	86	CST	GTE	Sec	SNET	USW	Penalty
Mean time to provide	1	1				411						
recorded usage records					ļ	<u> </u>						
Daily usage feed timeliness			1	į		}	ļ	1	1		1	
Daily usage feed timeliness -				1	†			1	†		 	ı
not provided on time ≤ 5 days					1	<u> </u>		1				
% usage polling system availability										1		
% usage data transmitted in ≤ 3 days					1					1		
% usage data transmitted in 4 days					1							
% usage data transmitted in ≤ 5 days					1							
% usage data transmitted in 8 days					1					1		
% usage data transmitted in X days			1									
Billing timeliness (wholesale/carrier bill)			1		1							
AEBS bills delivered late				1		1						
CABS bills delivered late				1							1	
Bills delivered within 10 days											1	
Mean time to deliver invoices	1	1				1						
% invoice accuracy	. 1					1						
% of accurate & complete			1						1			
formatted mechanized bills								1			<u> </u>	
% usage accuracy	√			([1 1	1		1]		

Billing				-								
Maggurement	LCUG	FCC	DOJ	AM	BA	88	CBT	GTE	SBC	SNET	USW	Penalty
% usage records returned	+		 	 	NY	 		 	+	 	 	
Billing accuracy (CRIS, CABS, toll/usage)			1			4			1			
% of billing records transmitted correctly			1						1			
Billing completeness			1						1			
Unbillable usage			1						1			

OS/DA/DL

Mecoupernent	fdro	Mec	DOJ	AM	BA	86	CAT	GTE	SEC	SNET	USW	Penalty
Mean time to answer	1					1 VA						
DA average speed of answer			1	1					V			
% DA calls answered within 20 seconds											1	
DA grade of service			1		1				1 1			
OS average speed of answer			1	1]				1			
% OS calls answered within 20 seconds											1	
OS grade of service			1						1			
% calls abandoned					`				1			
% calls deflected					1				1			
Non-call busy work volumes									1			
Average work time									1			
Average time provided to proof updated listings prior to publication	1										-	
% DA database updates completed within 72 hours									1			
Average update interval for DA database									1			
% DA database accuracy for manual updates									1			
% DA database update electronic flow thru									1			

Network Performance

Network Performance	1		T 501	400	1 54 10	1 66		1 000	T 666	LONET	1 440444	
Manaurement	rcue	FGC	DOY	AM	BA "	85	CAT	GTE	SMC.	SNET	USW	Penalty
% call completion (inbound &	1				 		1	1				· · · · · · · · · · · · · · · · · · ·
outbound)						1 4						<u>.</u>
Attempts blocked - Interlata				1								
Attempts Blocked - Intralata				1								
Mean time to notify CLEC of	1					7						
network incident/outage												<u></u>
Transmission quality	1											
% trunk blockage		7	1						1		1	
# of and % final trunk groups					NY					7		
exceeding blocking design	Į.		Į							ì	j	· .
standard	<u> </u>					<u> </u>			<u> </u>	<u> </u>		
# of and CLEC final trunk	1				NY		1		1	-		
groups blocked for 2 &/or 3						İ				1		
consecutive months			ļ	<u> </u>	4		 					
Final trunk group blocking -	}				NY		1	}			}	j ·
No EXCLUSIONS	ļ		<u> </u>		<u> </u>							
Common transport blockage			1				<u> </u>		1 1		<u> </u>	
Distribution of common			1 1	ł			ŀ	-	1	1	1	1
transport trunk groups	1		}				}	1			}]
exceeding 2%					<u> </u>	ļ	_		_		<u> </u>	<u> </u>
Switch outage minute per										[1	•	[I
access line							↓					ļ
# of failures			1	İ	NY,		1	1			1	1
	ļ				MA		<u> </u>				<u> </u>	
% failure frequency					MA					<u> </u>	ļ	
% without report outstanding			L		MA		<u> </u>		_ <u></u>	_L	<u>L</u>	<u></u>

¹⁵ Trunks only

Collocation Provisioning

Manager month	LOUG	SEC	901	AM	BA	96	CBT	GTE	SEC	SHET	USW	Penelty
Average/mean time to respond to collocation request 16	1			1		14			1			ı
Average/mean time to provide collocation arrangement	1			١		1			1			
% collocation due dates missed	1			1		1			1			1
% requests processed within 35 work days									1			

Database Updates

	rene	POG	beh	AM	BA.	Q.S	CST	GTE	SEC	SMET	UGW	Penalty
Average update interval	1	1							1			
% 911 customer record files not processed by next business day (Elec)				٧								1
% update accuracy	1	1							1		I	
% Errors in 911 customer records received (Elec)				1								
Average time to clear errors (911)			1						1			
% missed due dates		1										

¹⁶ It is not clear how this differs from other provisioning measurements such as the FOC interval.

Grantenant		FCC	BOT	AM	BA	36	CET	GTE	88 C	SNET	USW	Penalq
Function availability	1											
Timeliness of element performance	1					1						

Poles, Conduits & Rights of Way

Messyllignant	FEC	Ben	AM	BA	R \$	CBT	GTE	SEC	SNET	USW	Penalty
% requests processed within 35 work days								1			
Average days to process request					,			٧			

NXX

Massucant	fene	FCC	A	BA	86	CBT	Q7K	SP C	SNET	USW	Penalty
% NXXs loaded & tested prior to LERG effective date		-						7			
Average delay days for NXX loading & testing								1			

Bona Fide Request Process (BFRs)

	FCC	AM	84	CONT.		SMET	USW	Panelty
% requests processed within 45 business days					1			
% quotes within 30 business days					1			

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The attached matrix contains only those SQMs (Service Quality Measurements) to which penalties apply in one or more jurisdictions. The PENALTY indicates to the origin of the penalty in an abbreviated form.

- "A" Interconnection agreements in general
- "O" State regulatory order
- "M" Merger agreement

The matrix also provides the associated benchmarks and indication as to whether or not the penalties are self-executing followed by the actual penalty imposed and the companies in which the penalty is being proposed or has been implemented.

Note: U S WEST has not offered any remedies, fines/penalties/bill credits/liquidated damages.

Measurements to which penalties apply	Penalty Applies to	Benchmark	Self Executy	Penalty	AM)	BA	88	CBT	GTE	8BC	SNET	USW
Average installation interval	1	Parity - Resale (MI) 80% within 5 days for Unbundled Loops (MI)	Yes	Proposed in Mich to refund a portion of the recurring charge	1							
% installations completed on time	0	POTS – 99.0% Digital Specials – 90.0% Analog Specials – 90.0%	No	A percentage of total recurring revenue will be credited to the CLECs bill (separate % credited for both performance level and compatibility)							٧	
% orders completed on time	1	Standard Intervals vary by type of Service, UNE, etc. % quantity		95%				1				
% Confirmed Due Dates Not Met	I, A	Parity – Resale (MI) <20% of Loop Installations will be completed beyond the due date (MI) 80% of Loop Installations completed on time.	Yes	Proposed in Mich to refund a portion of the recurring charge. \$75,000 penalty when benchmark is not met for 3 consecutive months.	1							
Average Reject Notice Interval		80% of reject notices will be sent within 24 hrs for orders received electronically (MI)	Yes	Proposed in Mich to refund a portion of the recurring charge	1							
Average Completion Notice Interval	1	80% of completion notices provided within 48 hours	Yes	Proposed in Mich to refund a portion of the recurring charge	1							

Maintenance & Repair

Measurements to which penalties apply	Penalty Applies to	Renchmark	Self Executg	Penalty	AM	Ģ .▲	BS	CBT	GTE	SBC	SNET	USW
Mean time to repair (out of service- network troubles)	0	POTS - 21 Hours Digital Specials - 5.5 hours Analog Specials - 5.5 hours	No	A percentage of total recurring revenue will be credited to the CLEC's bill (separate percent credited for both performance level and comparability).							1	
Mean Time to Repair		Resale – Parity (MI) Unbundled Loop repairs will be completed < 36 hours (MI)	Yes	Proposed in Mich to refund a portion of the recurring charge	1							
% Repeat – Maintenance	1	Resale – Parity (MI) Unbundled Loops will have a trouble report rate ≤ 4% (MI)	Yes	Proposed in Mich to refund a portion of the recurring charge	1							
Trouble Report Rate	1	Resale – Parity (MI) Unbundled Loops will have a repeat rate < 17% (MI)	Yes	Proposed in Mich to refund a portion of the recurring charge	٧							
%Installation Trouble Reports (7 days)		Resale – Parity (MI) Unbundled Loops will have ≤ 6% Installation Trouble Reports (MI)	Yes	Proposed in Mich to refund a portion of the recurring charge	1							
% Repair Commitments Not Met		Resale – Parity (MI) < 20% trouble reports for Unbundled Loops will not be resolved by the committed time (MI)	Yes	Proposed in Mich to refund a portion of the recurring charge	1							

Maintenance & Repair

Measurements to which penalties apply	Penalty Applies to	Benchmark	Self Executg	Penalty	AM	ВА	88	CBT	GTE	SBG	SMET	USW
% maintenance appointments met: I. POTS II. Digital Special III. Analog Special	0	POTS – 94% Digital Specials – 70% Analog Specials – 70 %	No	A percentage of total recurring revenue will be credited to the CLEC's bill (separate percent credited for both performance level and comparability).							1	
Network reports per 100 lines	0	1.9 RPHL	No	A percentage of total recurring revenue will be credited to the CLEC's bill (credit given for performance level only).							1	
% Out of Service >24 Hours	A	80% of out of service troubles will be repaired within 24 hours	No	\$75,000 penalty when benchmark is not met for 3 consecutive months.	1				-			

General

7	Measurements to which penalties apply	Penalty Applies to	Benchmark	Self Executg	Penalty	AM	BA	BS	CBT	GTE	SBC	SNET	USW
	Pre-Ordering Interface – % Time Unavailable	1	The interface will be unavailable <1% of the time. (MI)	Yes	Proposed in Mich to refund a set amount per transaction.	1							
4444	Average Cycle Time -TN Selection -Due Date Selection -Pre-Ordering CSR -Address Validation	1	The interfaces will be unavailable <1% of the time. (MI)	Yes	Proposed in Mich to refund a set amount per transaction.	7							
4	Ordering ASR - % Time Unavailable	1	The interface will be unavailable ≤1% of the time. (MI)	Yes	Proposed in Mich to refund a set amount per transaction.	1				!			
	EBTA - % Time Unavailable	I	The interface will be unavailable ≤1% of the time. (MI)	Yes	Proposed in Mich to refund a set amount per transaction.	1							

Billing

Measurements to which penalties	Penalty Applies	arti.	Self Executy	Papally i	AM	BA	88	CBT	GTE	899	LISW
Daily Usage Timeliness – Not Provided on time > 5 days	1	<2% of Daily Usage Files will not be provided within 5 days.	Yes	Proposed in Mich to refund a set amount per transaction.	1						

OS/DA/DL - N/A

Network Performance

Measurements to which penalties apply	Penalty Applies	Banghmark	Self Executy	Penalty	AM	BA	88	CBT	GTE	88C	SNET	uala
Switch outage minutes per access line	0	1.3 minutes per access line	No	A percentage of total recurring revenue will be credited to the CLEC's bill (credit given for performance level only)							1	

Collocation Provisioning

Measurements to which penalties	Penalty Applies to	Benchmark	Self Execut	Penalty	AM	BA	BS	CBT	GTE	SBC	USW
Average Time to Respond to a Physical Collocation Request	I	80% of collocation requests will be responded to within 10 days.	Yes	Proposed in Michigan to refund a portion of the monthly floor space charge.	1						
% Due Dates Missed in Provision of Collocation Arrangement		<20% of due dates for collocation will be missed.	Yes	Proposed in Michigan to refund a portion of the project management fee.	1						

Database Updates

Measurements to which penaltips	Renahmerk	Self Executy	Resetty	A	96	CRT	GTE	88 C	MET	LIGHT
% 911 Customer Record Files Not Processed by Next Business Day (Elec)	Parity with retail	Yes	Proposed in Michigan to refund a portion of the tariffed monthly rate for 911 administration.	١						

Interconnect/Unbundled Elements and Combos (IUE) - N/A